

# National Roadmap for Safer Chemical Management in the Textile and Garment making Industry

SwitchMed II – Industry component (MED TEST III)

## *Morocco*



Co-funded by:

Funded by the European Union, with co-funding from the Government of Italy and the Government of Catalonia, the SwitchMed Programme is being implemented under the leadership of the United Nations Industrial Development Organization (UNIDO) in partnership with the United Nations Environment Programme (UNEP) Economy Division and MedWaves, the United Nations Environment Programme Mediterranean Action Plan (UNEP/MAP) and Regional Activity Centre for Sustainable Consumption and Production (formerly known as SCP/RAC). The initiative is being carried out in close collaboration with the European Commission's Directorate-General for Neighbourhood and Enlargement (DG NEAR).

Each implementing organization contributes specialized experience and tools to partner with the eight beneficiary countries on policy development, capacity building, business support services, demonstration activities and networking.

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# Executive summary

As part of the European Union (EU) funded SwitchMed Programme, the United Nations Industrial Development Organization (UNIDO) launched a textile initiative aimed at improving chemical management in the textile finishing sector across Morocco, Tunisia, and Egypt. In the third phase of this initiative, the focus was on providing training and technical support to a group of companies to help them achieve the Foundational level of compliance set by the Zero Discharge of Hazardous Chemicals (ZDHC) program. This involved conducting gap analyses, delivering training on safer chemical management, using online tools for sustainable practices, and developing a roadmap to scale up the outcomes of pilot activities on chemical management at the national level, as outlined in this document.

This document offers a detailed overview of the textile and garment industry in Morocco, examining both the opportunities and challenges faced by the sector within the selected project context of the SwitchMed Programme. The project context outlines the scope, methodology, and phases of the initiative for safer chemical management in textiles. Key findings and lessons learned from pilot projects are presented to inform subsequent sections, along with a comprehensive proposal for a National Roadmap.

The development of the National Roadmap is a vital process that includes consultations with key stakeholders such as the ZDHC, the School of Textile and Clothing (ESITH), and the Association of Moroccan Textile and Clothing (AMITH). Input from these key players helps to identify challenges and gaps within the industry and develop actionable projects aimed at promoting sustainable chemical management in Morocco.

The implementation plan of the National Roadmap outlines specific actions and timelines that provide a strategic guide for promoting sustainable chemical management in Morocco. This initiative places a strong emphasis on raising awareness through seminars, events, and the integration of sustainable practices into educational programs. Capacity building is a priority, involving the development and implementation of “Training for Trainers” programs at ESITH and the Moroccan Technical Centre for Textile and Clothing (CTTH). Additionally, training programs are planned for interested bodies and laboratories seeking ZDHC accreditation. Economic incentives and financial support from the Moroccan government will further incentivize chemical formulators and textile manufacturers to adopt sustainable practices. The National Roadmap also prioritizes the development of a chemical phase-out list, targeting non-compliant substances that are still in use.

Finally, modifications to policies and regulations within the Regulatory Framework will establish and enforce regulations, modernizing criteria for wastewater testing to ensure safer chemical management practices.

The document concludes by emphasizing the importance of collective efforts in achieving a sustainable and responsible textile industry in Morocco.



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# 1. Introduction

The textile industry in the Mediterranean region plays an essential role in shaping the region's economic landscape, contributing significantly to job creation and export revenues. However, this vital sector faces challenges that impact its competitiveness and sustainability. The industry is undergoing a major transformation as it copes with cheaper imports and adapts to consumer preferences for goods that are sustainably produced.

One of the significant challenges in the textile and garment sector is the extensive use of chemicals in processes such as dyeing, finishing, and printing. Managing and reducing the reliance on hazardous chemicals is essential for enhancing the industry's overall sustainability performance. As consumers become more aware of the environmental impact of their purchases, there is a growing urgency for the industry to adopt more sustainable and eco-friendly practices. While these chemical substances contribute to textile product innovation, concerns regarding their impact on the environment and health call for a thorough examination of industry practices.

In this context, the SwitchMed Program, initiated in 2014 and funded by the European Union, the governments of Italy and Catalonia, aimed to support eight countries in the southern Mediterranean region in advancing sustainable consumption and production patterns. Beginning in 2019, UNIDO launched a textile initiative in Egypt, Tunisia, and Morocco, focusing on advancing resource efficiency, circular economy practices, and chemical management in the textile and fashion value chain. The textile initiative in the three countries was structured around two main axes of intervention:

- i. the creation of a localized value chain for valorizing pre-consumption textile waste;
- ii. the introduction of safer chemical management protocols in collaboration with the ZDHC Foundation. The implementation of the latter was carried out in three phases:

**Phase I** – focused on training companies on chemical management in the textile industry, with an emphasis on ZDHC Guidelines.

**Phase II** - focused on implementing a full-scale technical assistance programme for six industrial facilities to adopt the ZDHC Guidelines and protocols.

**Phase III** - focused on extending training and technical assistance to a group of 15 companies, guiding them toward achieving the ZDHC Foundational level of compliance. This included gap analysis, training in safer chemical management, and the use of online tools for sustainable practices. It also included the development of a roadmap for scaling up the results of the pilot activities on chemical management at the country level.

Based on the results from Phase III, a National Roadmap for each of the three countries has been developed. The respective roadmap aims to provide strategic guidance on how to enhance sustainability and promote compliance with international standards, fostering a safer and more environmentally friendly textile industry. It has been created to encourage and facilitate discussions, among stakeholders regarding the steps, objectives, and timeframes for developing and implementing a strategic plan. It presents a framework for coordinating actions among stakeholders involved in representing industry interests conducting business operations and participating in research, development, policy formulation, and implementation.

This document draws on insights and knowledge gained from UNIDO's textile initiative during the SwitchMed textile initiative, which was implemented between 2019 and 2023 and covered all aspects of the textile and garment value chain.

Furthermore, the National Roadmap incorporates experience derived from projects and policies that focus on promoting the adoption of safer chemical practices and sustainability, within the textile sector.

## 2. Current state of the textile and garment industry in Morocco

The Moroccan textile sector stands out as a significant pillar of the national economy and is a major player on the international stage. With over 1,630 companies and 190,000 employees, it accounts for 22% of industrial employment and contributing to 15% of the industrial the Gross Domestic Product (GDP). This sector is crucial for the country's exports, making up 11% of the total<sup>1</sup>.

"Morocco has been among the top ten clothing suppliers in Europe for decades, and is today the second largest supplier in the Mediterranean basin," stated Anass El Ansari<sup>2</sup>, president of AMITH . The industry includes various segments such as garments, home textiles, and technical textiles. Morocco is the country that has experienced the greatest growth compared to the neighbouring countries, attracting investment and fostering trade relationships. European textile brands are shifting their focus from reducing costs and prioritizing proximity to the markets and ecological sustainability. As a result, fashion brands have started moving away from Asian producers to be closer to the Mediterranean region. Morocco possesses all the necessary qualities to capitalize on this development.

Numerous fashion brands from the EU, the United Kingdom, and the United States have been forming partnerships with Moroccan companies in the textile industry as they seek alternatives to their Asian suppliers.

The industry has benefited from government initiatives that promote economic diversification and export-oriented growth. Additionally, Morocco has also entered into trade agreements that have enhanced its competitiveness in the global market. Textile exports, encompassing garment and fabrics, have become a major source of revenue for the country.

### 2.1 Industry outlook

The textile industry in Morocco presents several opportunities for growth and development. Some of the key opportunities include:

**The geographical location:** A crucial factor for generating business opportunities in Morocco.

Tangier's proximity to Spain and the EU single market offers a significant advantage. Operationally, a large volume of cargo can be handled by the end of the week, to be displayed in Spanish stores the following Monday.

**Diversification of product range:** Morocco has developed a strategy to enhance its economy over the next decade by shifting the production of only raw materials to manufacturing finished goods. This strategic move aims to expand the range of products available for export, creating opportunities to cater to different markets and consumer preferences.

**Strong infrastructure network:** Morocco has a strong and well-developed infrastructure network, which is an important factor to its economic growth and appeal to investors. The country has strategically invested in building and enhancing its infrastructure across various sectors, including transportation, energy, and telecommunications.

**Industrial Zones:** Morocco has developed special economic zones and industrial parks tailored for the textile industry. These zones provide modern facilities, infrastructure, and logistical support for manufacturing activities, attracting both local and foreign investors.

**Government initiatives and support:** The government's strategy to boost the textile industry creates an environment where policy support and incentives may be available for businesses, fostering a conducive growth-friendly ecosystem. To modernize the textile sector, the government has launched programs that encourage the adoption of new technologies and more efficient production methods. This includes investment in machinery, automation, and digitalization. Morocco has also entered free trade agreements with several countries and regions, including the EU and the United States. These agreements provide easier access to major markets for Moroccan textile products by reducing tariffs and trade barriers. Furthermore, the government is working on simplifying regulations and to provide guidance to help textile businesses comply with international standards and quality norms.

**Investment incentives:** The government provides various incentives to attract both domestic and foreign investment in the textile sector. The incentives may include tax breaks, subsidies, reduced utility costs, and financial assistance for setting up businesses.

When strategically utilized, these opportunities can contribute to the sustainable growth and competitiveness of the textile industry in Morocco.

<sup>1</sup> Reference: [L'usine Nouvelle](#)

<sup>2</sup> Reported by the "Le 360 Portal" on May 30th, 2023

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## 2.2 Sustainability and chemical management within the textile sector in Morocco

The strategic reorientation towards premium or luxury fashion brands has positioned Morocco as a preferred partner for subcontracting in the European fashion industry. This transformation is also characterized by a growing ecological awareness. Moroccan companies have made significant investments in machinery aimed at enhancing their environmental performance.

Innovative techniques have been introduced to demonstrate the commitment to reducing the environmental impact of the sector. To give an example, recent investments in a new technology made it possible to save ten liters of water per meter of dyed denim, hence per pair of jeans. Additionally, the use of lasers has replaced sand-blasting as a technology for creating faded jeans, while ozone machines reduce the quantities of chemicals used. Other technologies have also been employed to reduce water consumption. Software solutions, such as Jeanologia, provide an environmental score for each wash, further emphasizing the industry's commitment to sustainability.

Despite these advancements, the use of chemicals in the textile finishing sector continues to be a major concern for the Moroccan textile industry. Addressing this issue requires navigating the complexities of international standards and regulations, which is a considerable challenge. Chemical management involves not only ensuring an appropriate storage, handling, and disposal of chemicals but also necessitates a strategic shift towards adopting safer and more environmentally friendly alternatives.

Training and education are vital for the advancement and sustained success of Morocco's textile industry. Key educational institutions, such as the Casa Moda Academy and ESITH, play a significant role in shaping the sector's future. The Casa Moda Academy offers a comprehensive education in fashion design, blending artistic, creative, and technical skills to align with global market trends. The ESITH focuses on a more technical approach that encompasses textile engineering, apparel manufacturing, and quality control. Its hands-on training in machinery and production processes is essential for a sector increasingly reliant on advanced technology for efficiency and sustainability. Both institutions offer specialized training that prepares graduates to be effective, innovative, and quality-driven in their roles from the beginning of their careers.





# 3. Project Context

## 3.1 Scope and Methodology

As part of the SwitchMed Programme, UNIDO launched a textile initiative aimed at promoting circular business models in the textile and garment industry, specifically in Tunisia, Morocco, and Egypt. This initiative focused on improving the management of pre-consumer textile waste and introducing valorization business models within the textile value chain in these three countries. In addition, the initiative also encouraged the adoption of best practices for safer chemical management in textile finishing. Working together with the ZDHC Foundation<sup>3</sup>, local textile federations and international brands, the textile initiative successfully conducted training modules on safer chemical management for over 48 companies, enhancing their skills in chemical inventory management, the substitution of harmful products, and wastewater control.

## 3.2 Description of the textile initiative for safer chemical management

### 3.2.1 Phase I

At the beginning of the project, there was a significant lack of awareness about the ZDHC Guidelines and requirements among sector representatives in the participating countries. To address this knowledge gap, the project launched a targeted training initiative aimed at wet-processing textile and garment companies in Tunisia, Morocco, and Egypt.

The training program had three distinct modules:

**Module 1:** Introduction to Chemical Management in the Textile Industry

**Module 2:** Top 10 Issues of Chemical Management

**Module 3:** Wastewater Management

UNIDO collaborated closely with the ZDHC Foundation and major global fashion brands to engage local suppliers from tiers one and two, particularly those involved in dyeing and finishing processes. The aim was to encourage these suppliers to participate in SwitchMed training activities focused on effective chemical management. The brands supported this effort by raising awareness and motivating their key suppliers to join the training. Participating companies were invited to express interest and nominate candidates for each module. In turn, UNIDO selected the most promising companies to benefit from the program. The roadmap included conducting two training cycles in each country, with around 25 participants per module. Upon completing each module, participants had the chance to take the ZDHC exam, further validating and certifying their expertise.

The training sessions were delivered online and followed a structured schedule.

**June 2020:** the participation of six Tunisian companies.

**July 2020:** three additional Tunisian companies.

**September 2020:** two Moroccan and four Tunisian companies.

**December 2020:** further engaged three Moroccan companies, one Tunisian company, and CETTEX .

**March 2021:** extended the initiative to six Egyptian companies in collaboration with the Industrial Modernization Center (IMC).

**June 2021:** participation of ten Egyptian companies.

The table below presents the results of the training sessions during phase I for the three countries:

Parameter	June 2020	July 2020	Sept. 2020	Dec. 2020	March 2020	June 2020
N. of Trainees	62	68	88	55	77	88
N. of ZDHC Academy training certificates issued	59	57	79	31	51	51
<b>Success rate</b>	<b>95%</b>	<b>84%</b>	<b>90%</b>	<b>56%</b>	<b>66%</b>	<b>64%</b>

Table 1: Final indicators for the training conducted during phase I

<sup>3</sup> Zero Discharge of Hazardous Chemicals (ZDHC): This is a program initiated by a group of major fashion brands and retailers with the goal of eliminating the use of hazardous chemicals in the textile, leather, and footwear value chain. The ZDHC program develops guidelines, tools, and trainings to drive the adoption of safer chemical management practices. This includes establishing protocols for wastewater discharge and chemical use, promoting more sustainable practices across supply chains, and working towards a vision where harmful chemicals are no longer released into the environment.

This phased approach not only facilitated tailored learning experiences for industry stakeholders but also fostered a continuous and progressive engagement with the ZDHC Guidelines and best practices in chemical management within the textile industry

A total number of 238 company employees were trained, with some of whom attending more than one training module, 501 exams were taken, 377 out of which achieved ZDHC Academy training certificates passing the final exam.

### 3.2.2 Phase II

Following the completion of the awareness-raising phase, two companies per country were identified from those that attended training sessions to receive customized technical assistance in formulating their individual roadmaps toward ZDHC compliance. The pilot companies, nominated by major brands, were encouraged by their primary customers to participate in the pilot initiative.

The technical assistance provided involved tailored one-to-one guidance to each company, covering specific aspects including:

- **Chemical Purchasing Policy and Procedures:** Offering guidance on the formulation of policies and procedures for the procurement of chemicals.
- **Preparation of a Chemical Inventory List:** Aligning with the ZDHC template, assistance was provided in creating a comprehensive Chemical Inventory List.
- **Roadmap for Chemicals Substitution:** This involved the development of a roadmap for substituting chemicals, including a risk assessment of existing chemicals.
- **Chemical Storage Management Audit:** Conducting an audit to assess and improve the management of chemical storage facilities.
- **Wastewater Assessment:** Evaluating wastewater management practices to ensure environmental compliance.
- **Effluent Treatment Plant Management:** Providing guidance on the management of effluent treatment plants.

Upon completing the technical assistance phase, companies were expected to have implemented all the necessary parameters for safer chemical management. Consequently, they were encouraged to apply for the Foundational level. Companies were also encouraged, on a voluntary basis, to undergo wastewater treatment to confirm compliance. In cases where non-conformities were identified, companies received support in developing corrective action plans.

The entire technical assistance process lasted approximately one year for each company, reflecting the systematic and detailed nature of the guidance provided.

By the end of this phase, five out of the six pilot companies assisted, achieved the ZDHC Foundational level. The results of the pilot projects are published in [a set of SwitchMed case studies](#).

### 3.2.3 Phase III

A pool of 15 companies—comprising eight from Tunisia, six from Egypt, and one from Morocco—was selected by UNIDO in collaboration with local textile federations and international brands. These companies received support to create their accounts on the ZDHC Supplier to Zero Platform. Following this, their current performance in chemical management was assessed against the ZDHC Supplier to Zero Foundational Level. A gap analysis was conducted for each of the 15 companies to determine what was needed to reach the ZDHC Foundational Level.

Based on the identified gaps and training needs, Leadership & Sustainability (L&S) delivered a training program to the 15 companies, consisting of a package of training sessions on safer chemical management requirements, comprising the following five modules:

- **Chemical Management System Technical Industry Guide:** This training provides practical guidance for the implementation of CMS TIG minimum requirements for sustainable chemical management and best practices.
- **Wastewater Management:** This training is designed to improve the company's understanding of Wastewater Management.
- **Effluent Treatment Plant Management:** This training gives an introduction to the latest ZDHC Wastewater Guidelines, including sampling and testing requirements.
- **Resource Efficiency:** This training covers strategies and best practices for using resources more efficiently throughout the supply chain, with a focus on reducing waste, conserving energy, and optimizing resource utilization.
- **Use of ZDHC on-line tools:** This training provides an overview on how ZDHC Guidelines, Platforms and Solutions can support the development and implementation of a Sustainable Chemical Management System.

The training sessions aimed to support the companies in developing their internal skills, educate related people working in these factories to understand how to implement safer chemical management standards, eliminate hazardous chemicals, and draw their specific roadmap to fill existing gaps.

The table below presents the results of the training sessions delivered during this phase:

Parameter	Tunisia	Morocco	Egypt	Total
Companies trained	8	1	6	15
Personnel trained	23	2	16	41
Number of ZDHC Academy training certificates issued	33	2	16	51
Number of non ZDHC Academy training certificates issued	51	3	18	72

Table 2: Final indicators for the training conducted during phase III

After providing the training, the L&S team worked on specific assistance for each company to guide them in implementing specific elements of their roadmap to fill in the gaps and reach the ZDHC Foundational level. The technical support assistance averaged three working days per company, depending on the level of assistance needed.

The table below presents the ZDHC self-assessment scores achieved by the Moroccan facility participating in the third phase of the project, before and after the technical assistance received for achieving the Foundational level of the Supplier to Zero Platform.

Supplier to Zero Aspect	Score before technical support from UNIDO	Score after technical support from UNIDO
Policy	50%	100%
Strategy	67%	100%
Assessment	100%	100%
Health & Safety	88%	100%
Chemical Inventory	80%	100%
Storage & Handling	100%	100%
Output Management	100%	100%
Air emissions	33%	100%
Continuous Improvement	0%	100%
Employee training	100%	100%
Process Control	50%	100%

Table 3: Scores on the Supplier to Zero Platform before and after assistance

The tables below present the consolidated results of all the training sessions conducted under this project (with the three phases) for the three countries:

Parameter	Tunisia	Morocco	Egypt	Total
N. of companies trained	21	6	21	48
N. of personnel trained (including CETTEX and IMC)	119	29	88	236

Table 4: Consolidated number of companies and personnel trained during the three phases

Parameter	June 2020	July 2020	Sept. 2020	Dec. 2020	March 2021	June 2021	July 2023	Total
N. of Trainees	62	68	88	55	77	88	71	501
N. of ZDHC Academy training certificates issued	59	57	79	31	51	51	49	377
<b>Success rate</b>	<b>95%</b>	<b>84%</b>	<b>90%</b>	<b>56%</b>	<b>66%</b>	<b>64%</b>	<b>69%</b>	<b>75%</b>

Table 5: Final indicators for the training conducted during the project with three phases

The findings of the technical assistance provided to the company participating in the project can be analyzed based on the identified gaps in practices and procedures. This analysis highlights areas that require significant improvement to align with international best practices and standards, particularly those set by ZDHC:

**Policy for Chemical Management:** Currently, there is an absence of a specific policy for chemical management that covers the latest ZDHC Manufacturing Restricted Substances List (MRSL) and Wastewater and Sludge Guidelines.

**Documented Chemical Management Strategy:**

The absence of a structured and documented approach to managing chemicals poses considerable risks. Without a clear strategy, the likelihood of mishandling chemicals and subsequent hazards increases. A well-documented strategy is essential not only for regulatory compliance, but also for ensuring the health and safety of employees, minimizing environmental impact, and maintaining operational efficiency and industry reputation. By implementing such a strategy, organizations can establish clear guidelines, enhance accountability, and facilitate consistent practices across the sector.

**Safety Data Sheets (SDS) Management:** The absence of a documented procedure for maintaining and regularly reviewing SDS for all chemicals points to potential gaps in information accessibility and chemical safety knowledge among workers.

**Air Circulation and Extraction Systems:**

Inadequate air circulation and extraction in areas where hazardous chemicals are used can lead to poor air quality and increased health risks for workers.

**Reviewing CMS Performance:** The lack of a standard operating procedure for reviewing Chemical Management System (CMS) performance indicates a shortfall in ongoing evaluation and improvement of chemical management practices.

**CMS Performance Review and Incident Management:**

Without a complete CMS performance review, including incident logs, root cause analyses (RCAs), and corrective action plans (CAPs), there is a missed opportunity for learning from past incidents and preventing future occurrences.

**Regular CMS Reviews:** The absence of regular CMS reviews to measure progress against the goals set in the CMS strategy suggests a lack of continuous improvement and adaptation in chemical management practices.

**Document and Record Control:** The lack of a standard operating procedure to control documents and records can lead to disorganization and inefficiency, potentially impacting compliance and traceability.

Finally, each country received a detailed plan, presented to national stakeholders, that highlights the potential benefits and necessary steps for upgrading the entire textile finishing sector to meet ZDHC best practices for safer chemical management.

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### 3.3 Lessons learned

The observations gathered from the training sessions and exam results from all project phases can be summarized as follows:

**Regional interest disparities:** Moroccan companies showed a lower level of interest compared to those of Tunisia and Egypt. The engagement levels of the participating pilot companies played a pivotal role. Many of these demonstrated a proactive willingness to embrace change and adhere to new requirements and guidance. They expressed commitment to implementing the corrective plans outlined for the future. In some cases, companies were motivated to participate when brands and customers expressed interest and made requests. However, challenges emerged when a pilot company lacked similar demands, which could lead to deviations from the established process and objectives. Maintaining close monitoring and assistance became crucial in these scenarios, particularly in promoting a new culture within the factory.

**Language preference:** The trainees requested that training sessions and exams be conducted in French instead of English, as they were not proficient in the latter.

**Module-specific engagement:** Notably, there was a decline in both interest and participant numbers for the Top Ten Issues of Chemical Management and Wastewater Management modules of the training compared to the initial module "Introduction to Chemical Management in the Textile Industry". This observation suggests the need for targeted strategies to maintain engagement throughout the entire training program.

**Impact of brand affiliation:** Companies affiliated with the ZDHC contributing brands exhibited a notably higher success rate in the training and exams compared to those not associated with these. This highlights the influence of brand affiliation on the commitment and success of participating companies.

On the other hand, exploring [the company case studies](#) provides valuable perspectives on integrating safer chemical management practices within the fashion value chain. These cases present a rich variety of experiences, providing a comprehensive understanding of the challenges faced. They also shed light on the effective strategies adopted by these companies. Several key lessons can be gathered from their experience:

**Flexibility and adaptability:** Moroccan companies have shown flexibility and adaptability to changing industry needs by modifying existing systems to align with globally recognized standards, such as the ZDHC Guidelines.

**Establishing an effective chemical management system:** Implementing a robust chemical management system from purchase to disposal is becoming increasingly imperative for Moroccan companies. This includes developing and reviewing procedures, enforcing a purchasing policy aligned with industry guides, and integrating hazard evaluations as a crucial decision-making criterion in the procurement process.

**Employee training:** Moroccan companies have invested in the capability of employees through comprehensive training to ensure that employees possess the necessary knowledge and skills. This contributes to a safer and more environmentally friendly workplace.

**Chemical supplier involvement:** There has been noted resistance among chemical suppliers to have proper Material Safety Data Sheet (MSDS) for all their chemicals. Furthermore, it has been difficult to convince them to conduct the necessary tests for product registration on the ZDHC Platform due to the additional costs involved.

**Chemical substitution:** Companies face challenges in substituting hazardous chemicals and phasing them out based on risk analysis because substitution requires time, resources, and extra costs.

**Wastewater testing:** Some companies are unaware of the significance of wastewater testing to identify non-conformities and ensure proper wastewater discharge.

**Documentation and records:** Maintaining records of training sessions, chemical inventory lists, and Standard Operating Procedures (SOPs) is not well implemented within certain companies.

**Certification and recognition:** The companies are unaware of the significance of achieving accreditations, such as the ZDHC Supplier to Zero assessment, and reaching the Foundational level despite these accreditations demonstrating a commitment to sustainable chemical management and providing tangible tools for implementing safer chemical management practices.

In conclusion, proactive engagement, continuous improvement, and adherence to industry standards are crucial for achieving safer and more sustainable chemical management practices in the textile and garments value chain.



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## 4. Development of the National Roadmap

The National Roadmap for Morocco's textile industry outlines a detailed and dynamic strategy focused on promoting sustainability and aligning with global standards. It provides strategic guidance to make the industry safer and more environmentally conscious.

The primary purpose of the National Roadmap is to promote structured exchange among various stakeholders, including manufacturers, educational institutions, and organizations to outline the necessary steps, objectives, and timelines for developing and implementing a strategic sustainability plan. This development process is collaborative, incorporating diverse perspectives from different industry players. A key part of this process involves identifying and evaluating the challenges that inhibit the adoption of safer chemical management practices within the industry.

To tackle these challenges, the National Roadmap proposes a multifaceted approach. This includes creating targeted training and capacity-building programs designed to equip industry professionals with essential skills and knowledge for sustainable practices. In addition to educational efforts, the strategy involves active stakeholder engagement through collaborative efforts. It emphasizes forming partnerships with brands, chemical formulators, policymakers, and local communities to advance a collective commitment to sustainable chemical management.

By combining education, collaboration, and communication, the roadmap aims to transform Morocco's textile industry into a model of sustainability and safety, compliant with international standards.

### 4.1 Stakeholders Involvement

Recognizing that successful outcomes rely on collaborative efforts, this section underscores the importance of engaging a wide range of participants and provides a comprehensive stakeholder landscape. The key players who have been consulted in drawing this roadmap and who can play a key role in the implementation of the roadmap are listed hereafter.

**The Moroccan Association of Textile and Clothing Industries (AMITH)**, has the mission of promoting, defending, and ensuring the development of the Moroccan textile and garment sector. It serves as the standard-bearer for its creativity, dynamism, and evolution, advocating for the interests of its ecosystems.

**The School of Textile and Clothing Industries (ESITH)**, is a Moroccan engineering school established in 1996 that focuses on textiles and clothing. ESITH was created as a result of a public-private partnership designed to grow this key sector in the Moroccan economy. Accredited according to the international standard ISO 17025, the ESITH laboratory supports businesses by providing them with its high-tech equipment and expertise.

**The Technical Center for Textile and Clothing (CTTH)** is a dedicated center providing support for companies within the Textile sector in Morocco focuses on improving the performance of businesses in this sector, CTTH aims to promote innovation and competitiveness. Notably, the CTTH laboratory holds ISO 17025 accreditation, ensuring high-quality standards in its operations.

**The Zero Discharge of Hazardous Chemicals (ZDHC)** foundation was initiated by a group of major fashion brands and retailers to eliminate the use of hazardous chemicals in the textile, leather, and footwear value chain. The ZDHC program develops guidelines, tools, and training to drive the adoption of safer chemical management practices. This includes establishing protocols for wastewater discharge and chemical use, promoting more sustainable practices across supply chains, and working towards a vision where harmful chemicals are no longer released into the environment.

**The United Nations Industrial Development Organization (UNIDO)** is a specialized agency of the United Nations. UNIDO was established in 1966 by the UN General Assembly to assist countries in economic and industrial development. UNIDO advocates that inclusive and sustainable industrial development is the key driver for the successful integration of the economic, social and environmental dimensions, required to fully achieve sustainable development for the benefit of our future generations. UNIDO strengthens international trade norms and standards by assisting developing countries and transition economies in upgrading production and processing systems to enhance the quality of local products, in particular through the adoption of improved technologies, and help them conform to the standards required by international markets. UNIDO builds capacities in both public and private institutions to formulate trade policies and strategies based on economic and statistical analysis.



## 4.2 Key challenges and implementation gaps

The current state of chemical management practices in Morocco's textile finishing sector shows promising progress. This positive development is largely due to capacity-building activities and implementation projects, primarily spearheaded by the SwitchMed Program and UNIDO, in collaboration with ZDHC Accredited Training Providers. These initiatives have established a solid foundation for sustainable practices in the industry.

The key challenges in implementing sustainable chemical management practices in Morocco's textile finishing sector have been collected through consultation with the national key institutions (AMITH, ESITH, etc.), ZDHC as well as by compiling observations by the L&S team consolidated during their work in companies (gap analysis and technical assistance support for implementing safer chemical management practices).

**Priority setting in Moroccan industry:** In Morocco, the industry focuses on "decarbonization," directing companies toward energy efficiency and resource conservation. The management of chemical products is perceived as less impactful on the environment. The ZDHC Guidelines are not considered a priority, and many companies have already embraced certifications such as REACH and OEKO-TEX, minimizing the perceived need for additional standards. Moroccan companies are, therefore, prioritizing measures that enhance energy efficiency and corporate social responsibility.

**Limited awareness:** There is a low level of awareness about ZDHC and sustainable chemical management practices, with a relatively small number of facilities (39) engaged with ZDHC practices. Information about industry events, developments, or significant topics does not effectively reach all relevant stakeholders or the broader community. This lack of outreach can result from various factors, such as using ineffective communication channels or failing to capture the audience's interest and highlight the significance of the information.

**Knowledge and implementation gaps:** Companies in the sector often lack knowledge on where to start with implementing safer chemical practices. There is also a shortage of service providers, including labs, in the region to support these initiatives. In Morocco, there are three major service providers that operate analytical laboratories (not accredited by ZDHC) and offer expertise and audits but do not provide training in chemical management protocols. Instead of relying continually on external expertise, building in-house expertise ensures that the knowledge remains within the local institutions and can be continuously updated and disseminated.

**Global standards integration and workforce empowerment:** At company level, meeting the challenge of aligning with international Chemical Management Standards involves harmonizing existing systems with globally recognized benchmarks, such as the ZDHC Guidelines. Companies must carefully review and adjust their procedures, procurement policies, and hazard evaluation protocols to ensure seamless alignment. Companies also face challenges in ensuring that employees possess the necessary knowledge and skills to handle chemicals safely and responsibly. Overcoming these challenges requires a commitment to regular training sessions covering work instructions, safety measures, and proper use of Personal Protective Equipment (PPE).

**Substitution dilemma and extra cost for companies:** Effectively addressing chemical substitution involves overcoming challenges within this complex process. Companies must invest time and resources to identify, compare, and select safer alternatives for chemicals of concern. While substitution is essential for reducing health and safety risks, it demands a strategic approach, including risk analysis and phased implementation. Balancing the need for efficacy and product quality with sustainability goals presents an ongoing challenge in the chemical substitution landscape. Additionally, the perception that replacing chemicals is costly can be a barrier, as it often necessitates training, revised policies, and skilled personnel.

Furthermore, Moroccan companies, which primarily are subcontracted and rely on large foreign brands, have limited incentives to adopt new chemical management practices. This arises from their current reliance on international client demands, concerns about additional costs, potential lack of awareness about the benefits, and the presence of existing certifications that are perceived as sufficient to meet industry requirements.

**Effective documentation management:** Maintaining records, including training sessions, chemical inventories, and SOPs, is fundamental for compliance. Companies face challenges related to documentation accuracy, accessibility, and traceability. Overcoming these challenges demands the establishment of robust document and record control procedures. Ensuring the availability and accuracy of documentation not only supports compliance but also provides valuable insights during audits and evaluations.

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**Continuous improvement struggle and certification commitment:** The pursuit of continuous improvement in chemical management practices is a persistent challenge. Companies must actively monitor and evaluate the effectiveness of implemented changes, identifying areas for improvement, adjusting strategies, and ensuring ongoing compliance. Committing to sustainable chemical management certifications presents distinct challenges. Achieving certifications such as the ZDHC Supplier to Zero assessment requires a dedicated effort. Companies must align their practices with stringent criteria, undergo rigorous assessments, and showcase a commitment to sustainable practices.

**Skill development:** The absence of sustainability as a topic in educational curricula presents a significant challenge. Institutions like ESITH and the Casa Moda Academy do not offer comprehensive modules that focus on green and sustainable methods. Integrating sustainability aspects into education is essential to ensure that future industry professionals are knowledgeable about environmentally friendly practices from the start of their careers.

**Lack of accredited laboratories:** The lack of accredited laboratories and service providers in Morocco, particularly for wastewater testing, poses a significant challenge. Despite having the necessary financial resources and equipment, Moroccan facilities send their wastewater samples to foreign countries for analysis. The dependency on external entities can lead to longer turnaround times for results, as well as logistical complexities and costs. Additionally, the shortage of accredited laboratories indicates a potential shortfall in skilled personnel capable of operating such facilities according to international standards. This situation underscores the need for establishing a process to achieve accreditation from relevant authorities, ensuring that the laboratories meet global quality and accuracy standards.

**Limited brand engagement:** The influence of brands is crucial in driving suppliers toward adopting a Chemical Management System (CMS) aligned with the ZDHC Guidelines. Increased brand engagement is necessary to encourage broader adoption of safer practices within their supply chains in Morocco.

**Chemical suppliers' engagement:** Many chemical products currently in use do not have comprehensive chemical data sheets, which complicates compliance efforts. For instance, there are no chemical formulators registered in the ZDHC Gateway. Convincing chemical suppliers to conduct the necessary tests for product registration on the ZDHC Platform is a critical challenge for ensuring transparency and compliance within the industry. Many companies have struggled with this issue. The primary obstacle is the reluctance of suppliers, which is largely driven by concerns over the additional costs associated with the required testing processes. These expenses can deter chemical suppliers from complying with the ZDHC Guidelines, creating a significant barrier to entry. The financial implications, combined with the absence of chemical data sheets for certain products, further exacerbate this challenge. To effectively address this issue, companies must adopt a strategic and collaborative approach.



## 5. Roadmap

The National Roadmap is structured into a set of actions, related to seven key objectives, aimed at promoting sustainable practices and ensuring the responsible use of chemicals in the Moroccan textile sector.

The initial phase involves a detailed National Survey to assess existing practices, setting the groundwork for subsequent improvements. Following this, a key milestone is the Roundtable discussion with influential organizations and brands to secure commitment, aligning stakeholders towards shared goals within a specified timeframe. The National Roadmap emphasizes broad industry engagement, encouraging major brands to participate and facilitating knowledge exchange through seminars and events. Educational transformation is integral, involving the integration of sustainable practices into academic programs and the development of targeted training initiatives for institutions like ESITH and CTTH. The focal point of this initiative is the pursuit of ZDHC approval, accompanied by training and capacity building programs for manufacturers and chemical suppliers.

Furthermore, the National Roadmap strategically incorporates economic incentives and financial support from the Moroccan Government to the chemical formulators and textile manufacturers to foster industry compliance and encourage them to adopt and implement the ZDHC Guidelines. A critical step involves the development of a chemical phase-out list targeting non-compliant substances in manufacturing processes to ensure their elimination. The Regulatory Framework holds significant importance as it seeks to modernize and elevate standards such as laws related to wastewater testing. This aims to establish and enforce regulations that prioritize the promotion of safer chemical management practices.

No.	Key Objectives	Actions
1	Establish sector baseline	National Survey of the textile sector in Morocco
2	Stakeholder engagement	Collaborations and partnerships
3		Engage major brands.
4		Seminars and events
5	Awareness raising	Mainstreaming chemical management in education
6		Communication material
7	Capacity building	Train the Trainers Programme
8		Training of the textile Manufacturers.
9	Establish economic instruments	Economic incentives for chemical formulators
10		Incentives and recognition schemes for textile manufacturers.
11		Approval of laboratories according to the ZDHC requirements
12	Prioritize phase out of hazardous chemicals	Hazardous chemicals phase-out list for the MED region
13	Regulatory framework upgrade	Policy instruments

Table 6: List of identified actions within the national scaling up roadmap

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## 5.1 Roadmap actions

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### 1 – National survey of the textile sector in Morocco

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<b>Description</b>	<ul style="list-style-type: none"><li>• A National Survey to be initiated by AMITH aiming at evaluating current chemical management practices and areas of improvement in Moroccan textile factories.</li><li>• The survey should include at least 200 of the over 1,500 textile companies in Morocco, as representative samples for the assessment.</li><li>• The survey should also include a significant representation of the 96 chemical manufacturers located in Morocco.</li><li>• The survey can utilize a combination of online data collection methods-including existing platforms like the Higg FEM (wastewater and chemicals modules) and Supplier to Zero (ZDHC) for standardized and globally recognized data collection.</li><li>• The survey should be updated every five years to track industry progress toward the adoption of safer chemical practices.</li></ul>
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<b>Objective</b>	Establish a national baseline of the sector
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<b>KPIs</b>	Coverage Rate: Percentage of targeted companies (both textile and chemical manufacturers) that participate in the assessment. This KPI measures the extent of engagement in the survey. Number of certifications or audits passed related to environmentally responsible chemical management. Scores of the factories on the Supplier to Zero and selected sections of Higg FEM. Gap analysis summary.
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<b>Key stakeholders</b>	ESITH, AMITH, Textile Manufacturers, Chemical formulators, ZDHC.
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### 2 – Collaborations & partnerships

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<b>Description</b>	Workshops with ZDHC, EUD, European Bank for Reconstruction and Development (EBRD), SAC, AMITH, and ESITH: Events to be organized with the purpose of discussing the roadmap and securing the commitment from different organizations.
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<b>Objective</b>	Stakeholder engagement
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<b>KPIs</b>	Specific commitment and funding amount Number of manufacturers engaged. Number of events.
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<b>Key stakeholders</b>	AMITH, ESITH, ZDHC, Textile Manufacturers, EUD, EBRD and SAC.
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### 3 – Brands’ Engagement

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<b>Description</b>	<p>A dialogue to be initiated by ZDHC in collaboration with AMITH, with major brands operating in Morocco, highlighting the benefits of adopting safer chemical practices and specifically promoting activities in Morocco.</p> <p>Identify major brands operating in the Moroccan textile industry by utilizing industry databases, market reports, and collaboration with industry associations.</p> <p>Initiate a dialogue to introduce the initiative and emphasize the benefits of adopting safer chemical practices.</p> <p>Advocate for major brands to actively implement ZDHC Programs within their Moroccan operations. Encourage them to integrate sustainability criteria into their procurement processes, prioritizing suppliers with a strong commitment to safer chemical practices</p> <p>Collaborate with brands to design and conduct training sessions, ensuring that their Moroccan suppliers gain practical insights into implementing safer chemical practices.</p> <p>Advocate for funding and research: Engage with industry partners, governmental bodies, and organizations to secure funding for research projects focused on chemical prioritization and sustainable practices</p>
<b>Objective</b>	Stakeholder engagement
<b>KPIs</b>	<p>Number of major brands committing to implement specific supplier programs in Morocco.</p> <p>Number of manufacturers engaged.</p> <p>Number of people participating in ZDHC trainings.</p> <p>Number of workshops</p>
<b>Key stakeholders</b>	AMITH, ESITH, ZDHC, Textile Manufacturers, SAC, Brands.

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### 4 – Seminars and events

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<b>Description</b>	<ul style="list-style-type: none"><li>ESITH and AMITH in collaboration with manufacturers can organize seminars and events to share best practices and success stories. This will allow stakeholders to exchange insights, challenges, and lessons learned in the journey towards sustainable chemical management.</li><li>ZDHC manufacturers forum: The forum can facilitate focused discussions on ZDHC guidelines, compliance, and emerging trends, ensuring that manufacturers are well-informed and aligned with global best practices. Experts within the ZDHC network can provide specialized insights, further enriching the knowledge-sharing experience for participating manufacturers.</li><li>Social media, corporate websites, and industry platforms can also be effectively used to showcase success stories, innovative practices, and case studies, promoting a sense of industry-wide achievement and progress.</li></ul>
<b>Objective</b>	Awareness raising
<b>KPIs</b>	<p>Number of events.</p> <p>Number of companies participating in the events.</p> <p>Success stories demonstrating the impact of these innovative approaches.</p>
<b>Key stakeholders</b>	ESITH, AMITH, ZDHC, Textile manufacturers.

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## 5 – Mainstreaming chemical management in education

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<b>Description</b>	<ul style="list-style-type: none"><li>• ESITH as an educational institution collaborates with the relevant Ministry of Education to integrate sustainable practices into relevant educational programs.</li><li>• In-depth integration: Work closely with educators, curriculum developers, and industry experts to embed sustainable chemical management principles across disciplines, ensuring a holistic understanding and adoption of these practices.</li><li>• Casa Moda: Incorporate a training module covering all sustainability related topics.</li><li>• Collaborative content development: Collaborate with industry experts, sustainability consultants, and educational specialists to ensure the educational module aligns with current industry standards and addresses emerging challenges.</li><li>• Research opportunities: Encourage and support student-led research projects focused on advancing sustainable chemical management within the textile industry.</li><li>• Industry collaboration: Encourage collaboration between students and industry professionals, providing students with valuable exposure to real-world challenges and opportunities through internship programs.</li></ul>
<b>Objective</b>	Awareness raising
<b>KPIs</b>	Number of courses/students related/attending to safer chemicals management in the educational program of ESITH and Casa Moda.
<b>Key stakeholders</b>	ESITH, Casa Moda, Ministry of Education, industry experts, sustainability consultants, and educational specialists.

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## 6 – Communication material

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<b>Description</b>	Development of a mini awareness guide (Mini-Book) available on the AMITH website, aiming to promote the transition to good practices and underscore the importance of sustainable initiatives, accessible to all.
<b>Objective</b>	Awareness raising
<b>KPIs</b>	Creation of a mini-guide and dissemination on the AMITH website.
<b>Key stakeholders</b>	AMITH, ESITH, ZDHC

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## 7 – Train the trainers programme

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<b>Description</b>	<p>Develop and conduct trainings for ESITH and CTTH with support from ZDHC &amp; its Accredited Training Providers in collaboration with AMITH to facilitate the creation of a nationally accredited service provider for the delivery of ZDHC trainings.</p> <p>Organize a Training program where ESITH-approved trainers provide comprehensive training for the training bodies and laboratories who are interested in ZDHC approval.</p> <ul style="list-style-type: none"><li>• Work closely with ZDHC and its network of Accredited Training Providers to involve experts who have both global perspective and local insights for a Training of Trainers (ToT) activity: Organize a ‘Training of Trainers’ program where ESITH and CTTH educators and trainers receive intensive training from ZDHC Accredited Training Providers. The objective is to build in-house expertise and ensure that the knowledge transfer is sustainable.</li><li>• During this training, hands-on workshops and seminars should be organized, where participants can apply what they have learned in real-life scenarios. Include interactive sessions, group discussions, and problem-solving exercises.</li></ul>
<b>Objective</b>	Capacity building
<b>KPIs</b>	Number of trainees who received the training and successfully attained approval.
<b>Key stakeholders</b>	ESITH, AMITH, CTTH, ZDHC, Accredited Training Providers, Training bodies, and Laboratories in Morocco.

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## 8 – Training of Textile manufacturers

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<b>Description</b>	<ul style="list-style-type: none"><li>• ESITH and AMITH can in collaboration with ZDHC and Accredited Training Providers plan a national training program for textile and apparel manufacturers to promote the adoption of safer chemicals practices and the implementation of ZDHC requirements.</li><li>• The national training program is an initiative designed to address specific skill gaps and knowledge requirements within the finishing textile sector on a nationwide scale. With a focus on interactive and practical learning, the program aims to equip participants with the essential skills and insights necessary for success in their roles. Developed through a collaborative effort involving ESITH, AMITH, industry experts, and trainers, the program covers a structured curriculum aligned with national goals. The program should be tailored to the identified needs of the target audience. Participants can expect hands-on workshops, expert-led sessions, and a supportive learning environment.</li></ul>
<b>Objective</b>	Capacity building
<b>KPIs</b>	Number of companies active on the ZDHC Platform Number of trainees who received the training and success rate.
<b>Key stakeholders</b>	ESITH, AMITH, ZDHC, Accredited Training Providers, Textile Manufacturers.



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## 9 – Economic Incentives for Chemical Formulators

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<b>Description</b>	AMITH in collaboration with ZDHC provides support to chemical formulators seeking accreditation for their products on the ZDHC Platform. Recognizing the complexity and importance of this process, AMITH and ZDHC develop a systematic approach to guide formulators through every step of the accreditation journey. The selection of accredited laboratories capable of conducting the necessary tests and offer guidance on sample collection and preparation procedures to ensure accuracy. The goal is to ultimately contribute to safer and more sustainable chemical management practices within the industry.
<b>Objective</b>	Establish economic instruments
<b>KPIs</b>	Number of chemical products registered in the ZDHC Gateway.
<b>Key stakeholders</b>	Chemical formulators, AMITH, ZDHC.

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## 10 – Incentives and Recognition scheme for textile manufacturers

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<b>Description</b>	Economic incentives and financial support from the Moroccan Government to encourage the textile manufacturers to adopt environmentally friendly practices. These incentives can take various forms, such as tax breaks, subsidies, grants, low-interest-rate loans, or rebates, designed to make sustainable choices financially attractive. For instance, companies that invest in green technologies or adhere to environmentally friendly manufacturing processes may receive tax reductions or subsidies, reducing their overall operational costs.
<b>Objective</b>	Establish economic instruments
<b>KPIs</b>	The total value of investments leveraged.
<b>Key stakeholders</b>	Manufacturers, Relevant Ministries, AMITH, Brands

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## 11 – Approval of laboratories according to the ZDHC requirements

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<b>Description</b>	Economic incentives and financial support from the Moroccan Government to upgrade training facilities, laboratories, and resources at ESITH as required to meet the standards of ZDHC approval.  This may include acquiring new equipment, software, or learning materials.
<b>Objective</b>	Establish economic instruments
<b>KPIs</b>	Amount of funds allocated and utilized.
<b>Key stakeholders</b>	ESITH, Training Providers, Laboratories, Relevant ministries, and governmental agencies.

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## 12 – Hazardous chemicals phase-out list for the MED region.

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<b>Description</b>	<p>Development of a chemical phase-out list specific to Morocco: ZDHC in collaboration with ESITH can work together to identify the chemicals that need to be phased out (chemicals that are MRSL non-compliant and are still used in the manufacturing process) and establish clear and achievable timelines for the phase-out process. The phase-out list can then be made available to all relevant parties.</p> <p>National survey carried out during the first phase of this Roadmap, detox.live and InCheck reports, can be used for ensuring alignment with established standards such as REACH or ZDHC.</p> <p>Promote:</p> <ul style="list-style-type: none"><li>• substitution strategies.</li><li>• Use of computational tools e.g.: <a href="https://www.epa.gov/comptox-tools">https://www.epa.gov/comptox-tools</a></li><li>• Use of the SIN list <a href="https://sinlist.chemsec.org/">https://sinlist.chemsec.org/</a></li></ul>
<b>Objective</b>	Prioritize phase-out of hazardous chemicals
<b>KPIs</b>	Creation of a national phase-out list. Implementation rate of the phase-out list year by year.
<b>Key stakeholders</b>	ZDHC, Textiles companies registering in ZDHC, Chemical suppliers, ESITH, TfS.

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## 13 – Policy instruments

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<b>Description</b>	<p>AMITH in collaboration with policymakers works together to establish and enforce regulations that promote safer chemical management.</p> <ul style="list-style-type: none"><li>• A proposed recommendation is to contemporize and elevate the criteria for wastewater testing, making them more stringent and in harmony with global standards.</li><li>• Upgrade the existing Decree 2942-13 of October 7, 2013, establishing general discharge limit values for surface or groundwater, amended by Decree 3286-17 of September 4, 2017. Requirements pertaining to any type of water discharge are not subject to specific regulations.</li><li>• Morocco has a general decree in place that mandates the assessment of industrial wastewater discharge. However, specific regulations have been established for distinct sectors like cement, sugar, paper, and cardboard. Notably, the textile industry lacks this specialized regulatory framework. This gap in legislative coverage for the textile industry raises important considerations for environmental monitoring and regulation. It highlights the need for tailored frameworks and guidelines that address the unique characteristics and potential environmental impacts associated with textile manufacturing processes.</li><li>• It is recommended to establish limit values for the physical, chemical, biological, and bacteriological attributes of discharges originating from textile facilities.</li></ul>
<b>Objective</b>	Regulatory framework update
<b>KPIs</b>	Number of new regulations/guidelines.
<b>Key stakeholders</b>	AMITH, Policymakers.

## 5.2 Implementation Timeline

The roadmap's execution is structured into phases based on the urgency of the intervention. Nearly all the actions represent short-term priority initiatives spanning from 2024 to 2027.

Meanwhile, some of these actions are anticipated to extend into the period from 2027 to 2030. This extended timeframe aims to generate the necessary impact for the comprehensive transformation of the adoption of safer chemicals into a contemporary and effective system.

### National Roadmap - Actions

Action	Timeline
<b>A National Survey</b> initiated by AMITH aiming at evaluating chemical management practices in Moroccan textile factories.	2024-2025
<b>Workshops</b> with the purpose of discussing the roadmap and securing the commitment from these organizations.	2024-2027
<b>Engage major brands:</b> A dialogue to be initiated by ZDHC with major brands operating in Morocco, highlighting the benefits of adopting safer chemical practices and specifically promoting activities in Morocco.	2024-2027
<b>Mainstream chemical management education:</b> ESITH and Casa Moda as educational institutions collaborate with the relevant Ministry of Education to integrate sustainable practices into relevant educational programs.	2027-2030
<b>Develop and conduct trainings</b> "Training for trainers" for ESITH and CTTH with support from ZDHC and its Accredited Training Providers in collaboration with AMITH to reinforce their capacity.	2024-2025
<b>Train the trainers program</b> where ESITH-approved trainers provide comprehensive training for the training bodies and laboratories who are interested in ZDHC approval.	2025-2027
<b>Training and capacity building for the manufacturers:</b> ESITH and AMITH can in collaboration with ZDHC and accredited Training Providers plan a national training program for textile and apparel manufacturers to promote the adoption of safer chemicals practices and the implementation of ZDHC requirements.	2025-2027
<b>Empower chemical formulators</b> with the resources and expertise needed to navigate the approval process successfully and have their products registered on the ZDHC Gateway.	2025-2030
<b>Economic incentives and financial support</b> from the Moroccan government for the chemical formulators and textile manufacturers.	2027-2030
<b>Approval of laboratories according to the ZDHC requirements:</b> financial support from the Moroccan Government to upgrade training facilities and laboratories.	2027-2030
<b>Development of a chemical phase-out list of chemicals</b> that are MRSL non-compliant and are still used in the manufacturing process in the region.	2025-2030
<b>Policy instruments:</b> AMITH in collaboration with policymakers work together to establish and enforce regulations that promote safer chemical management. A proposed recommendation is to contemporize and elevate the criteria for wastewater testing, making them more stringent and in harmony with global standards.	2027-2030
<b>Development of a mini awareness guidebook</b> (Mini-Book) available on the AMITH website, aiming to promote the transition to good practices and underscore the importance of sustainable initiatives, accessible to all.	2025-2030

